## NC

This is intended for util affs, because it doesn’t solve the aff per se, just their impacts.

Text: Developing countries should prioritize resource extraction for the purpose of space colonization.

The counter-plan is key to sustaining a high enough level of tech and resource use to give space colonization momentum.

**Engdahl 12** writes[[1]](#footnote-1)

We do not want even the present restriction on resources. Currently, some nations live well while others are deprived, and it’s asserted that even those with the best access to resources should stop using them up—the **underdeveloped nations**, under this philosophy, **are not given** the **hope of a standard of living commensurate with the level our species has achieved. Will the Third World tolerate such a situation forever? I surely wouldn’t blame them for not wanting to.** And neither do I want the rest of the world reduced to a lower level of technology. Even if I had no other objection to such a trend, the plain fact is that a **low level** of **tech**nology **cannot support the same size population** as a high level**;** so **if you want to cut back on tech**nology**, you have to** either **kill people** outright **or let them starve**. And you certainly can’t do anything toward extending the length of the human lifespan. This is the inevitable result of planning based on a single-planet environment. If there is pessimism in Earthbound science fiction (which its most outstanding characteristic), these truths are the source of it. I have not seen any that denies any of them; pop-culture SF reveals that what people grasp mythopoeically about such a future involves catastrophic war, cut-throat human relationships in overcrowded cities, and a general trend toward dehumanization. Apart from the major films with which my course dealt (e.g. Bladerunner), Soylent Green postulates cannibalism and Logan’s Run is based on the premise that everybody is required to die at the age of 30. The destruction of the world’s ecology is a basic assumption—which is natural, since in a contest between a stable biosphere and personal survival, humans will either prevail or they will die. Myths showing these things are indeed part of the response to a new perception of our environment: the perception that as far as Earth is concerned, it is limited. [A basic premise of my course was that all myth is a response of a culture to the environment in which it perceives itself to exist.] But at the rational level, people do not want to face them. They tell themselves that **if we** do our best to **conserve resources** and give up a lot of the modern conveniences that enable us to spend time expanding our minds, **we can avoid such a fate**—as indeed we can, **for a while. But not forever. And** most significantly, **not for long enough to establish space settlements**, if we don’t start soon enough. Space humanization is not something that can be achieved overnight. I have called this stage in our evolution the “Critical Stage.” Paul Levinson [the Director of Connected Education] uses different terminology for the same concept. He says that **we have only a narrow window to get into space**, a relatively short time during which we have the capability, **but have not yet run out of** the **resources to do it**. I agree with him completely about this. **Expansion into space demands high tech**nology **and full utilization of** our world’s material **resources** (although not destructive utilization). It also demands financial resources that we will not have if we deplete the material resources of Earth. And it demands human resources, which we will lose if we are reduced to global war or widespread starvation. Finally, it demands spiritual resources, which we are not likely to retain under the sort of dictatorship that would be necessary to maintain a “sustainable” global civilization.

Space col solves all aff impacts.

**Schulze-Makuch and Davies 10** write[[2]](#footnote-2)

There are several reasons that motivate the establishment of a permanent Mars colony. **We are a vulnerable species** living in a part of the galaxy **where** cosmic events such as major **asteroid and comet impacts and supernova explosions pose a** significant **threat to life on Earth**, especially to human life. There are also more **immediate threats** to our culture, if not our survival as a species. These **include** global **pandemics, nuclear or bio**logical **warfare,** runaway **global warming**, sudden **ecological collapse and supervolcanoes** (Rees 2004). Thus, the **colonization** of other worlds **is a must if the human species is to survive for the long term.** The first potential colonization targets would be asteroids, the Moon and Mars. The Moon is the closest object and does provide some shelter (e.g., lava tube caves), but in all other respects falls short compared to the variety of resources available on Mars. The latter is true for asteroids as well. **Mars is** by far the most **promising** for sustained colonization and development, **because it is similar** in many respects to Earth and, crucially, **possesses** a **moderate** surface **gravity, an atmosphere,** abundant **water and carbon dioxide**, together with a range of essential minerals. Mars is our second closest planetary neighbor (after Venus) and a trip to Mars at the most favorable launch option takes about six months with current chemical rocket technology.

## AT Aff Scenarios

Reducing the probability of existential disaster through space colonization is more valuable than preventing specific impact scenarios. Overly detailed impact predictions are improbable and create false perceptions of security.

**Yudkowsky 6** writes[[3]](#footnote-3)

According to probability theory, **adding** additional **detail** onto a story **must render the story less probable**. It is less probable that Linda is a feminist bank teller than that she is a bank teller, since all feminist bank tellers are necessarily bank tellers. **Yet** human **psychology** seems to **follow the rule that adding** an additional **detail can make the story more plausible.** People might pay more for international diplomacy intended to prevent nanotechnological warfare by China, than for an engineering project to defend against nanotechnological attack from any source. The second threat scenario is less vivid and alarming, but the defense is more useful because it is more vague. **More valuable** still **would be strategies which make humanity harder to extinguish without being specific to** nanotechnologic **threats - such as colonizing space**, or see Yudkowsky (this volume) on AI. Security expert Bruce Schneier observed (both before and after the 2005 hurricane in New Orleans) that the U.S. government was guarding specific domestic targets against "movie-plot scenarios" of terrorism, at the cost of taking away resources from emergency-response capabilities that could respond to any disaster. (Schneier 2005.) Overly detailed reassurances can also create false perceptions of safety: "X is not an existential risk and you don't need to worry about it, because A, B, C, D, and E"; where the failure of any one of propositions A, B, C, D, or E potentially extinguishes the human species. "We don't need to worry about nanotechnologic war, because a UN commission will initially develop the technology and prevent its proliferation until such time as an active shield is developed, capable of defending against all accidental and malicious outbreaks that contemporary nanotechnology is capable of producing, and this condition will persist indefinitely." **Vivid**, specific **scenarios** can **inflate our probability estimates** of security, **as well as misdirecting** defensive **investments into** needlessly narrow or **implausibly detailed** risk **scenarios.**

## Extra Impact Cards

Colonization would reduce existential risk—we need lifeboats for Spaceship Earth

**Gott 11** writes[[4]](#footnote-4)

I've been advocating a one-way colonizing trip to Mars for many years (Gott, 1997, 2001, 2007). Here's what I said about it in my book, Time Travel in Einstein's Universe: "The goal of the human spaceflight program should be to increase our survival prospects by colonizing space. ... **we should concentrate on establishing the first** self-supporting **colony in space** as soon as possible. ... We might want to follow the Mars Direct program advocated by American space expert Robert Zubrin. But rather than bring astronauts back from Mars, we might choose to leave them there to multiply, living off indigenous materials. We want them on Mars. That's where they benefit human survivability.... Many people might hesitate to sign up for a one-way trip to Mars, but the beauty is that we only have to find 8 adventurous, willing souls" (Gott 2001). I've been stressing the fact that we should be in a hurry to colonize space, to improve our survival prospects, since my Nature paper in 1993 (Gott 1993). The real space race is whether we get off the planet before the money for the space program runs out. The human spaceflight program is only 50 years old, and may go extinct on a similar timescale. Expensive programs are often abandoned after a while. In the 1400s, China explored as far as Africa before abruptly abandoning its voyages. Right now **we have all our eggs in one basket: Earth**. The bones of extinct species in our natural history museums give mute testimony that **disasters on Earth routinely occur that cause species to go extinct.** It is like sailing on the Titanic with no lifeboats. **We need** some **lifeboats. A colony on Mars might** as much as **double our long-term survival prospects by giving us two chances** instead of one. Colonies are a great bargain: you just send a few astronauts and they have descendants on Mars, sustained by using indigenous materials. It's the colonists who do all the work. If one is worried that funds will be cut off, it is important to establish a self-supporting colony as soon as possible. Some have argued that older astronauts should be sent on a one-way trip to Mars since they ostensibly have less to lose. But I would want to recruit young astronauts who can have children and grandchildren on Mars: people who would rather be the founders of a Martian civilization than return to a ticker-tape parade on Earth. Founding a colony on Mars would change the course of world history. You couldn't even call it "world" history anymore. If colonizing Mars to increase the survival prospects of the human species is our goal, then, since money is short, we should concentrate on that goal. In New Scientist (Gott 1997) I said: "And if colonization were the goal, you would not have to bring astronauts back from Mars after all; that is where we want them. Instead we could equip them to stay and establish a colony at the outset, a good strategy if one is worried that funding for the space programme may not last. So we should be asking ourselves: what is the cheapest way to establish a permanent, self-sustaining colony on Mars?" I have argued that it is a goal we could achieve in the next 50 years if we directed our efforts toward that end. We would need to launch into low Earth orbit only about as many tons in the next 50 years as we have done in the last 50 years. But will we be wise enough to do this?

Space col independently solves multiple scenarios for extinction. **Baum 10**[[5]](#footnote-5)

**A**nother non-market **benefit of space ex**ploration **is reduction in the risk of** the **extinction** of humanity and other Earth-originating life. **Without space col**onization**,** the **survival of humanity** and other Earth-originating life **will become** extremely difficult – perhaps **impossible** – over the very **long term.** This is because the Sun, like all stars, changes in its composition and radiative output over time. The Sun is gradually converting hydrogen into helium, thereby getting warmer. In some 500 million to one billion years, this warming is projected to render Earth uninhabitable to life as we know it [25] and [26]. Humanity, if it still exists on Earth then, could conceivably have developed technology to survive on Earth despite these radical conditions. Such technology may descend from present proposals to “geoengineer” the planet in response to anthropogenic climate change [27] and [28].2 However, later – around seven billion years later – the Sun will lose mass that spreads into Earth's orbit, causing Earth to slow, be pulled into the Sun, and evaporate. The only way life could survive on Earth would be if, by sheer coincidence (the odds are on the order of one in 105 to one in 106 [29]), the planet happened to be pulled out of the Solar System by a star system that was passing by. This process might enable life to survive on Earth much longer, although the chances of this are quite remote. While **space col**onization **would** provide a hedge against these very long-term astronomical threats, it would also provide a **hedge against** the more immediate threats that face humanity and other species. Such threats include **nuclear war**fare**, pandemics,** anthropogenic **climate change, and disruptive tech**nology**.** Because **these threats would** generally **only affect life on Earth and not** life **elsewhere**, self-sufficient space colonies would survive these catastrophes, enabling life to persist in the universe. For this reason, space colonization has been advocated as a means of ensuring long-term human survival [32] and [33]. Space exploration projects can help increase the probability of long-term human survival in other ways as well: **technology developed for space ex**ploration **is central to** proposals to **avoid threats from large comet and asteroid impacts.**

1. Sylvia Engdahl (teaches an online course on Space Age Mythology). “Space and Human Survival:  
   My Views on the Importance of Colonizing Space.” June 18th, 2012. http://www.sylviaengdahl.com/space/survival.htm [↑](#footnote-ref-1)
2. Dirk Schulze-Makuch, Ph.D., School of Earth and Environmental Sciences, Washington State University and Paul Davies, Ph.D., Beyond Center, Arizona State University, “To Boldly Go: A One-Way Human Mission to Mars”, 2010 <http://journalofcosmology.com/Mars108.html> [↑](#footnote-ref-2)
3. Eliezer Yudkowsky (Co-founder and Research Fellow of the Singularity Institute for Artificial Intelligence—a non–profit research institute dedicated to increasing the likelihood of, and decreasing the time to, a maximally beneficial singularity, one of the world’s foremost experts on Artificial Intelligence and rationality), “Cognitive Biases Potentially Affecting Judgment Of Global Risks,” Draft of a chapter in Global Catastrophic Risks, edited by Nick Bostrom and Milan Cirkovic, August 31st, 2006, Available Online at http://singinst.org/upload/cognitive-biases.pdf, Accessed 11-11-2010 [↑](#footnote-ref-3)
4. J. Richard Gott, III, (Ph.D., professor of astrophysical sciences at Princeton University, recipient of the Robert J. Trumpler Award, an Alfred P. Sloan Fellowship, the Astronomical League Award, and Princeton's President's Award for Distinguished Teaching) “A One-Way Trip to Mars,” Journal of Cosmology, 2011, Vol 13, <http://journalofcosmology.com/Mars151.html> [↑](#footnote-ref-4)
5. Seth D. Baum, Ph.D in Geography from Pennsylvania State University and M.S. in Electrical Engineering from Northeastern University and scholar at Columbia University's Center for Research on Environmental Decisions, “Cost–Benefit Analysis Of Space Exploration: Some Ethical Considerations”, Space Policy Volume 25, Issue 2, May, pg 75-80, http://www.sciencedirect.com/science/article/pii/S0265964609000198 [↑](#footnote-ref-5)